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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

RAO, M

ART UNIT	PAPER NUMBER
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1652

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DATE MAILED:

06/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/558,421

Applicant(s)

Deb Chatterjee

Examiner

Manjunath N. Rao

Art Unit

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Mar 20, 2001

2a) ☐ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-28 is/are pending in the application

4a) Of the above, claim(s) 7-14 and 21-28 is/are withdrawn from consideration

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-6 and 15-20 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: _____

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DETAILED ACTION

1. Claims 1-28 are still at issue and are present for examination.

Election/Restriction

2. Applicant's election with traverse of Group I, Claims 1-6, and 8-13, 15-20, 22-27 in Paper No. 3 is acknowledged. The election of species, "*Thermus aquaticus* polymerase" drawn to claims 1-6, 15-20 is also acknowledged. The traversal is on the ground(s) that coexamination of all of Groups I-II would not constitute undue burden on the Examiner. This is not found persuasive because while the searches for the three groups overlap, they are not coextensive. The inventions are drawn to polynucleotides and polypeptides which have distinct chemical and physical structures. They are manufactured and sold separately. Searching both groups and all species does constitute undue burden to the Examiner. This is because the search for Groups I and II would each require the search of subclasses unnecessary for the search of elected Group I. For example, search of Group I would require search of subclass 435/69.1 and search of Group II would require search of subclass 435/194. In addition to the above the search involves extensive non-patent literature search. Furthermore, each species represents a separate polynucleotide encoding a separate enzyme which has different physical, biochemical and mechanism of action characteristics.

The requirement is still deemed proper and is therefore made FINAL.

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Claims 7-14, 21-28 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected group and species, the requirement having been traversed in Paper No. 3.

Drawings

3. This application has been filed with drawings that have been objected to by the Draftsperson. Please see the attached form PTO948 for details.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3 and 17 recite the limitation "The molecule" in line 1. There is insufficient antecedent basis for this limitation in the claim. Amending the claims to recite "the DNA molecule" would overcome this rejection.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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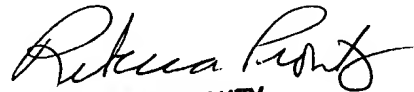
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-6, 15-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Tabor et al. (US 5,614,365, issued 3-25-1997, filed 11-10-1994). This rejection is based upon the public availability of a patent. Claims 1-6, 15-21 of the instant application are drawn to a DNA molecule comprising a coding sequence for a mutant DNA polymerase (elected species, Taq polymerase, claims 15-21) selected from a group as described in claim 1, wherein the mutant DNA polymerase comprises a substitution of Tyr for Phe at a position in said polymerase corresponding to Phe570 of wild type T5 polymerase, Phe667 of the wild-type Taq polymerase, a vector comprising said DNA molecule under the control of a heterologous promoter (claims 2-3, 16-17), a host cell such as *E.coli* comprising said DNA molecule (claims 4-5, 18-19) and a method of producing the mutant protein (claim 6, 20). Tabor et al. disclose mutant DNA polymerases such as Bacteriophage T5 polymerase in which a tyrosine residue replaces the Phe residue at position 570 and a mutant Taq polymerase with a corresponding change at position 667 (i.e., Tyr for Phe667). See paragraph bridging col 5 and 6 and also last para column 21 and lines 1-19 column 22. The reference also discloses vectors comprising DNA molecules encoding such mutant polymerases, host cells and methods of making the mutant protein. Therefore Tabor et al. anticipate claims 1-6 and 15-20 of this application as written.

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Conclusion

7. None of the claims are allowable.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manjunath Rao whose telephone number is (703) 306-5681. The Examiner can normally be reached on M-F from 6:30 a.m. to 3:00 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, P. Achutamurthy, can be reached on (703) 308-3804. The fax number for Official Papers to Technology Center 1600 is (703) 305-3014. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.


REBECCA E. PROUTY
PRIMARY EXAMINER
GROUP 1800
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Manjunath N. Rao
June 3, 2001